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wherein at least a portion of the one of the at least two conductor layers that is closest to said microstrip line and faces the microstrip line is omitted;
said microstrip line defines a microstrip line resonator;
at least one of said plurality of dielectric layers, at least one of said at least two grounding conductor layers and said strip line define a strip line resonator; and
a single resonator is defined by said microstrip line resonator and said strip line resonator.

2. A resonator according to Claim 1, wherein said portion of said one of the at least two conductor layers that is omitted is disposed within said multi-layer substrate and is arranged such that said grounding conductor layer disposed on the lower surface of said multilayer substrate faces said microstrip line.

8. A resonator comprising:
a multi-layer substrate having an upper and lower surface, and including at least two conductor layers which include at least two grounding conductor layers and a plurality of dielectric layers, one of the at least two grounding conductor layers being disposed on the lower surface of the multi-layer substrate, and one of the at least two conductor layers that is closest to said microstrip line and faces the microstrip line has an opening formed therein;
a strip line disposed between the at least two grounding conductor layers;
a microstrip line disposed on the upper surface of said multi-layer substrate; and
a through hole formed in said dielectric layers to connect said strip line to said microstrip line;
said microstrip line defines a microstrip line resonator;
at least one of said plurality of dielectric layers, at least one of said at least two grounding conductor layers and said strip line define a strip line resonator; and
a single resonator is defined by said microstrip line resonator and said strip line resonator.

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14. A voltage controlled oscillator comprising:

a resonator including:

a multi-layer substrate having an upper and lower surface, and including at least two conductor layers which include at least two grounding conductor layers and a plurality of dielectric layers, one of the at least two grounding conductor layers being disposed on the lower surface of the multi-layer substrate;

a strip line disposed between the at least two grounding conductor layers;

a microstrip line disposed on the upper surface of said multi-layer substrate; and

a through hole formed in said dielectric layers to connect said strip line to said microstrip line;

wherein at least a portion of the one of the at least two conductor layers that is closest to said microstrip line and faces the microstrip line is omitted;

said microstrip line defines a microstrip line resonator;

at least one of said plurality of dielectric layers, at least one of said at least two grounding conductor layers and said strip line define a strip line resonator; and

a single resonator is defined by said microstrip line resonator and said strip line resonator; and

a plurality of electronic component elements disposed on the upper surface of the multi-layer substrate and arranged to define a circuit.

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16. The voltage controlled oscillator according to claim 14, wherein said portion of said one of the at least two conductor layers that is omitted is disposed within said multi-layer substrate and is arranged such that said grounding conductor layer disposed on the lower surface of said multi-layer substrate faces said microstrip line.